Toxic Substances

Fort Wainwright, Alaska
Environmental Officer Course
2011

Outline

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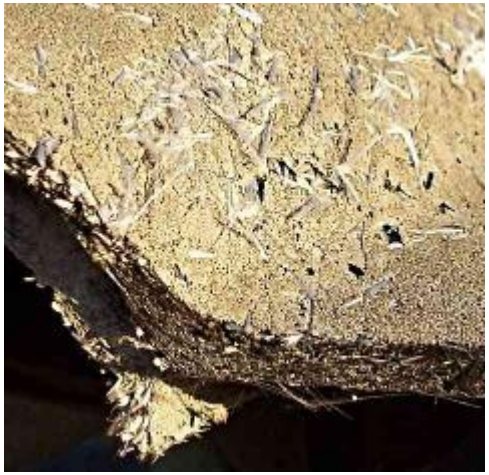
Introduction

- Fort Wainwright has many older and historical buildings which may contain asbestos and lead-based paint.
- Remediation has occurred on a case-by-case basis – your building may still contain these materials!

Asbestos

- A group of naturally occurring minerals that separate into fibers.
- Asbestos Containing Material (ACM) – any material or product that contains more than 1% of asbestos.
- Fibers can break down smaller than some germs.

Asbestos



Asbestos

- Friable – ACM that contains more than one percent asbestos as determined by 40 CFR 763, subpart E, Appendix E, when dry can be crumbled, pulverized or reduced into a powder by hand pressure; includes durable materials in poor condition.
- Non-friable – ACM that when dry can not be crumbled, pulverized, or reduced to powder by hand pressure.

Asbestosis

- Scarring of the lung tissue
  - Latency period of 10-30 years.
  - Symptoms include shortness of breath, cough, weakness.
  - Treatments include removal from exposure source, prevention and/or prompt treatment of respiratory illnesses.

Lung Cancer

- Cancerous growth of lung tissue
  - Latency period of about 30 years.
  - Risk increases exponentially with smoking.
  - Treatments include surgery, radiation and chemotherapy.

Mesothelioma

- Malignancy of the lung or abdominal cavity lining
  - Latency period about 30-40 years.
  - Symptoms include chest/abdominal pain, shortness of breath, nausea, vomiting.
  - Is always fatal.

Asbestos Uses

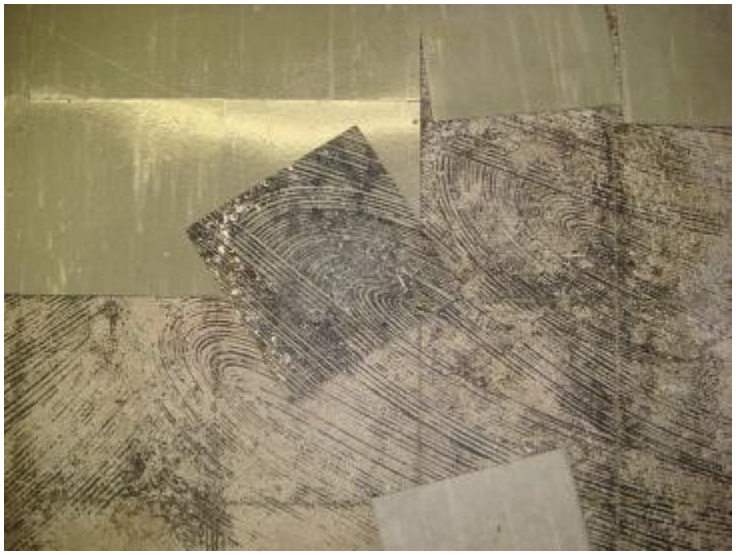
- Found in thousands of products.
- Has not been banned except in certain uses/products.
- Anything that is not glass, wood, or metal may contain asbestos.

Pipe Insulation

Brake Pads

Miscellaneous Building Materials

Flooring and Mastic



Old Safes

Lead-based Paint

- LBP – Lead-based Paint
  - Concentration of lead is 1mg/cm2 (or 5,000 μg/g by dry weight) or more of lead.

- LCP – Lead Containing Paint
  - Concentration is 4999 ppm or less.
  - Not regulated by the EPA.
  - OSHA still requires special work practices.

Lead-based Paint Health Risks

- Dizziness
- Nausea
- Headaches
- Constipation
- Irritability
- Fatigue
- Abdominal Pain
- Sterility
- Birth Defects
- Miscarriages/Stillbirths
- Kidney failure
- Cardio-respiratory arrest
- Coma
- Many more…

What does LBP look like?

Summary

- Be aware that your buildings may contain asbestos or lead-based paint.
- If you need to clean the area, damp mop – do not sweep.
- Do not start any construction projects, remodel/demolish without first contacting PWE for prior approval.
- Always contact PWE with any questions.

END

INSTALLATION MANAGEMENT COMMAND

"Sustain, Support and Defend"